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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/895,466	06/29/2001	Robin Budd	EMC-00-066	6561

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EXAMINER	
CASIANO, ANGEL L	
ART UNIT	**PAPER NUMBER**
2182	

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/895,466	BUDD ET AL.	
	Examiner	Art Unit	
	Angel L. Casiano	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 February 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 February 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Response to Amendment

The present Office action is in response to Amendment dated 28 February 2005.

Claims 1-16 are pending.

Drawings

1. Previous Objections to the Drawings have been overcome with the submission of the Amendment.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Previous Rejections for claims 1, 4, and 8 have been overcome.

4. Rejection for Claim 7 stands, because the language still recites, "the receive volume". There is insufficient antecedent basis for this limitation.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1-3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai et al. [US 5,948,079] in view of Webber [US 6,529,518 B1].

Regarding claim 1, Tsai et al. teaches a computer system having a plurality of computers connected to storage system in a network (see Figure 1, elements 104, 108, 110, 106, 102, 114), each computer having software capable of sending and receiving network (element 110) information. Tsai et al. teaches a method for receiving transmission packets and placing the transmission packets into a queue determined by the type of transmission packet (see col. 2, lines 45-60, "buffer"). This step is accomplished by the reference by having a descriptor for the packet (see col. 4, lines 1-7). However, the reference fails to teach the step of upon filling the buffer to a predetermined point, waking the internal thread to process the filled buffer, wherein the internal thread writes the contents of the buffer to the storage system, as claimed. Regarding this limitation, Webber teaches a buffer in a network system (see col. 9, lines 15-19) where upon reaching a predetermined point (e.g. "one quarter full") it is emptied. Accordingly, one of ordinary skill in the art at the time of the invention would have been motivated to combine the cited disclosures in order to implement optimized processing of data packets within a computer system according to data speed, as taught by Tsai et al. (see col. 5, lines 55-57; col. 6, lines 1-4).

As for claim 2, Tsai et al. teaches submitting the transmission packets to the write buffer (see Figure 3, elements "312" and "316"; col. 4, lines 4-5).

As for claim 3, Tsai et al. fails to teach the step of, upon filling the buffer to a predetermined point, processing (transporting the packets) the filled buffer. Regarding this limitation, Webber teaches a buffer in a network system (see col. 9, lines 15-19) where upon reaching a predetermined point (e.g. "one quarter full"), the packets are transported.

7. Claims 4-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai et al. [US 5,948,079] in view of Webber [US 6,529,518 B1] in further view of Lozowick et al. [US 5,228,083].

As for claim 4, the combination of references does not teach writing the packets upon unavailability of the network. Regarding this limitation, Lozowick et al. teaches a method in which inbound packets are stored in a buffer (see col. 2, lines 25-29, 51-58). Therefore, if the connection to the network is unavailable but an interface is available, packets are transmitted out of the buffer. The prior combination of references (Tsai et al. in view of Webber) teaches communication optimization for different speeds in data transmission (see col. 5, lines 52-67). Therefore, one of ordinary skill in the art would have been motivated to modify the combination of references in order to implement an optimized data processing method for the event of network disconnection, as taught by Lozowick et al.

As for claim 5, the combination of references (see Tsai et al.) teaches a storage system having a "send" and "receive" section (see Figure 3). The contents of the buffer are written to a second volume (see Figure 3, "312", "316"; col. 3, line 67).

As for claim 6, these volumes are located separately (see Tsai et al., Figure 3, "312", "314").

As for claim 7 (*this claim is construed as being dependent upon claim 4, due to the lack of antecedent basis in the language*), the combination of references (see Tsai et al.) teaches transmission packets having a header, which indicates the portion read (see Figure 4, "1A"-"3A" written into buffer "316").

As for claim 8, the combination of references (see Tsai et al.) teaches a storage system having a "send" and "receive" section (see Figure 3). The contents of the buffer are written to a second volume (see Figure 3, "312", "316"; col. 3, line 67). The combination of references does not teach two separate volumes. Nonetheless, it would have been obvious to position the elements in the system, as part of a network, geographically apart from each other.

As for claim 9, the combination of references (see Tsai et al., col. 3, lines 6-17) teaches controlling the writing process to the buffer.

As for claim 10, the process of copying contents is done upon a command (see Tsai et al., col. 3, line 15, "controls").

8. Claims 11-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tsai et al. [US 5,948,079] in view of Lozowick et al. [US 5,228,083].

Regarding claim 11, Tsai et al. teaches a computer system having a plurality of computers connected to storage system (see Figure 1, elements 104, 108, 110, 106, 102, 114), each computer having software capable of sending and receiving network (element 110) information. Tsai et al. teaches a method for receiving transmission packets and placing the transmission packets into a queue determined by the type of transmission packet (see col. 2, lines 45-60, "buffer"). This step is accomplished by the reference by having a descriptor for the packet (see col. 4, lines 1-7). Tsai et al. does not teach writing the packets upon unavailability of the network. Regarding this limitation, Lozowick et al. teaches a method in which inbound packets are stored in a buffer (see col. 2, lines 25-29, 51-58). Therefore, if the connection to the network is unavailable but an interface is available, packets are transmitted out of the buffer. Tsai et al. teaches communication optimization for different speeds in data transmission (see col. 5, lines 52-67). Therefore, one of ordinary skill in the art would have been motivated to modify the Tsai et al. reference in order to implement an optimized data processing method for the event of network disconnection, as taught by Lozowick et al.

As for claim 12, Tsai et al. teaches reading the volume after it is written (see col. 3, lines 6-28).

As for claim 13, Tsai et al. teaches a plurality of applications (see Abstract). Nonetheless, the combination of references does not teach clustering specifically. However, one of ordinary skill in the art would have been motivated to implement clustering as part of the plurality of applications, since it is well known in the art.

As for claim 14 and 15, the combination of references teaches a computer network (se Tsai et al., Figure 1). It is well known in the art that the Internet is an example of one of the networks that would be included as part of the prior art disclosure.

As for claim 16, the combination of references (see Tsai et al.) teaches a storage system having a "send" and "receive" section (see Figure 3). The contents of the buffer are written to a second volume (see Figure 3, "312", "316"; col. 3, line 67). The combination of references does not teach two separate volumes. Nonetheless, it would have been obvious to position the elements in the system, as part of a network, geographically apart from each other.

Response to Arguments

9. Applicant's arguments filed 28 February 2004 have been fully considered but they are not persuasive.

Regarding independent claim 1, Examiner acknowledges that the Tsai et al. reference fails to teach the step of *upon filling the buffer to a predetermined point, waking the internal thread to process the filled buffer, wherein the internal thread writes the contents of the buffer to the storage system*, as claimed. However, Webber teaches a buffer in a network system (see col. 9, lines 15-19) where upon reaching a predetermined point (e.g. "one quarter full") it is emptied. The Webber reference includes a bypass buffer, storing packets of a determined type (from a neighboring adapter) and this buffer acts as a queue, as "packets are stored as a local packet is sent" (see Abstract).

As for claim 4, in response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., "continuous write", Page 22) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Regarding independent claim 11, Examiner recognizes that Tsai et al. does not teach *writing the packets upon unavailability of the network.* Lozowick et al. teaches a method in which inbound packets are stored in a buffer. According to this reference, in the case that connection to the network is unavailable but an interface is available, packets are transmitted out of the buffer. A person of ordinary skill in the art would have been motivated to modify the Tsai et al. reference in order to implement an optimized data processing method for the event of network disconnection, as taught by Lozowick et al.

10. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

11. In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning (page 21 of the Remarks on Claim 3), it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include

knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Conclusion

12. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angel L. Casiano whose telephone number is 571-272-4142. The examiner can normally be reached on 9:00-5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin can be reached on 571-272-4146. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Alc
14 May 2005

JEFFREY GAFFIN
SUPERVISORY PATENT EXAMINER
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